

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:

10/602,136

Confirmation No.: Unassigned

Applicant:

Sommadossi et al.

Filed:

June 20, 2003

TC/A.AU.:

Unassigned

Examiner:

Unassigned

Docket No.:

06171.105074 IDX 1007 DIV

Customer No.:

20786

Title:

Methods and Compositions for Treating Hepatitis C Virus

Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

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Respectfully submitted,

Sherry M. Knowles, Esq.

Reg. No. 33,052

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Complete if Known Substitute for form 1449A/PTO Application Number 10/602,136 **Filing Date** INFORMATION DISCLOSURE June 20, 2003 First Named Inventor STATEMENT BY APPLICANT Sommadossi et al. Group Art Unit Unassigned

Examiner Name

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Unassigned Attorney Docket Number 06171.105074 IDX 1007 DIV Sheet 6

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	U.S. PATENT DOCUMENTS									
Examiner Initials *	Cite No. 1		ment Kind Code if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pgs, Clmns, Lns, Where Relevant Passages/Relevant Figs Appear				
	AA	3,480,613	A	Walton et al.	11-25-1969					
	AB	5,977,061	Α	De Clercq	11-02-1999					
	AC	6,340,690	B1	Bachand et al.	01-22-2002					
	AD	6,348,587	Bl	Schinazi et al.	02-2002					
	AE	6,395,716	Bl	Gosselin et al. (Novirio / Idenix)	05-28-2002					
	AF	6,444,652	Bl	Gosselin et al. (Novirio / Idenix)	09-03-2002					
	AG	6,573,248	Bl	Ramasamy et al.	06-03-2003					
	AH	2002/0019363	Al	Ismaili et al.	02-2002					
	ΑI	2002/0055483	Al	Watanabe et al.	05-09-2002					
	AJ	2002/0147160	Al	Bhat et al.	10-10-2002					
	AK	2003/008841	A1	Devos et al.	01-09-2003					
	AL	2003/028013	Al	Wang et al.	02-06-2003					
	AM	2003/0050229	A1	Sommadossi et al.	03-13-2003					
	AN	2003/0060400	Al	LaColla et al.	03-27-2003					
	AO	2003/0083307	Al	Devos et al.	05-01-2003					
	AP	2003/0087873	Al	Stuyver et al.	05-08-2003					

				FOR	EIGN PATENT DOCUMENTS			
Examiner Initials *	Cite No. 1	. I ()ttigg" Number Kind ('odg"		Code ²	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Τ ⁶
	AQ	FR	1,521,076	A	Merck & Co. Inc.	MM-DD- YYYY 04-12-1968	rigures Appear	
	AR	FR	1,581,628	Α	Merck & Co. Inc.	09-19-1969		
	AS	FR	2,662,165	Α	Univ. Paris Curie	11-22-1991		
	AT	GB	1,163,103	Α	Merck & Co. Inc.	09-04-1969		
	AU	GB	1,209,654	Α	Merck & Co. Inc.	10-21-1970		
	AV	JP	63-215694	Α	Yamasa Shoyu Co. Ltd.	09-08-1988		
	AW	JP	06-228186	Α	Yamasa Shoyu Co. Ltd.	08-16-1994		
	AX	WO	98/16184	A2	ICN Pharmaceuticals	04-23-1998		
	AY	WO	99/43691	Al	Emory U.; U.Ga.R.F.	02-09-1999		
	AZ	WO	00/09531	A2	Novirio Pharm. (Idenix)	02-24-2000		
	AAA	WO	01/32153	A2	Biochem Pharma	05-10-2001		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 6

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Application Number	10/602,136				
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First Named Inventor	Sommadossi et al.				
Group Art Unit	Unassigned				
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Attorney Docket Number	06171.105074 IDX 1007 DIV				

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				FOR	EIGN PATENT DOCUMENTS	-	~	
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	BA	WO	01/60315	A2	Biochem Pharma	08-23-2001		
	BB	WO	01/68663	Al	ICN Pharmaceuticals	09-20-2001		
	BC	WO	01/79246	A2	Pharmasset	10-25-2001		
	BD	WO	01/90121	A2	Novirio Pharm. (Idenix)	11-29-2001		
	BE	WO	01/91737	A2	Novirio Pharm. (Idenix)	06-12-2001		1
	BF	WO	01/92282	A2	Novirio Pharm. (Idenix)	06-12-2001		T^{-}
	BG	WO	01/96353	A2	Novirio Pharm. (Idenix)	12-20-2001		
	BH	WO	02/03997	Al	ICN Pharmaceuticals	01-17-2002		
	BI	WO	02/18404	A2	F. Hoffmann-La Roche	03-07-2002		
	BJ	WO	02/32920	A2	Pharmasset	04-25-2002		
	BK	WO	02/48165	A2	Pharmasset	06-20-2002		
	BL	wo	02/057287	A2	Merck & Co. Inc.	07-25-2002		
	BM	wo	02/057425	A2	Merck & Co. Inc.	07-25-2002	, i	
	BN	WO	02/070533	A2	Pharmasset	09-12-2002		
	ВО	WO	02/094289	Al	F. Hoffmann-La Roche	11-28-2002		
	BP	WO	02/100415	A2	F. Hoffmann-La Roche	12-19-2002		
	BQ	WO	03/026589	A2	Idenix; CNRS; U. Montp.	04-03-2003		
	BR	WO	03/026675	Al	Idenix; CNRS; U. Montp.	04-03-2003		
	BS	wo	03/051899	A 1	Ribapharm	06-26-2003		
	BT	wo	03/061385	Al	Ribapharm	07-31-2003		
	BU	wo	03/061576	A2	Ribapharm	07-31-2003		
	BV	wo	03/062255	A2	Ribapharm	07-31-2003		
	BW	wo	03/062256	Al	Ribapharm	07-31-2003		
	BX	wo	03/062257	A1	Ribapharm	07-31-2003		
	BY	wo	03/063771	A2	Pharmasset	08-07-2003		
	BZ	wo	03/068162	A2	Pharmasset	08-21-2003		
	BAA	wo	03/072757	A2	Biota Inc.	09-04-2003		
	BAB	wo	03/093290	A2	Genelabs Technologies	11-13-2003		\Box
	BAC	wo	04/002422	A2	Idenix; Univ.D.S.Cagliari	01-08-2004		$ \neg $
	BAD	WO	04/002999	A2	Idenix; Univ.D.S.Cagliari	01-08-2004		

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Substitute for form 1449A/PTO			's TO ST	Application Number	10/602,136	
INFO	ORMATION I	DISCLO	OSURE	Filing Date	June 20, 2003	
STA	TEMENT BY	APPLI	CANT	First Named Inventor	Sommadossi et al.	
				Group Art Unit	Unassigned	
	(use as many sheets	s as necessar	<i>)</i>	Examiner Name	Unassigned	
Sheet	3	of	6	Attorney Docket Number	06171.105074 IDX 1007 DIV	

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		OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS	434_2
Examiner	Cite	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine,	ı
Initials *	No. 1	journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Т°
	CA	ALTMANN et al, "The synthesis of 1'-methyl carbocyclic thymidine and its effect on nucleic acid	
		duplex stability," Synlett, Thieme Verlag, Stuttgart, De, 10:853-855 (1994).	
	CB	BAGINSKI, S. G, et al., "Mechanism of action of a pestivirus antiviral compound," PNAS USA,	
		97(14):7981-7986 (2000).	1
	CC	BEIGELMAN, L.N., et al, "Epimerization during the acetolysis of 3-O-acetyl-5-O-benzoyl-1,2-O-	
		isopropylidene-3-C-methyl-α,D-ribofuranose. Synthesis of 3'-C-methylnucleosides with the β-D-	
		ribo- and α-D-arabino configurations," Carbohydrate Research, 181:77-88 (1988).	
	CD	BEIGELMAN, L.N., et al, "A general method for synthesis of 3'-C-alkylnucleosides," Nucleic Acids	
		Symp. Ser., 9:115-118 (1981).	
	CE	BERENGUER, M., et al, "Hepatitis B and C viruses: Molecular identification and targeted antiviral	
		therapies," Proceedings of the Association of American Physicians, 110(2), 98-112 (1998).	
	CF	CARROLL, S.S., et al., "Inhibition of hepatitis C virus RNA replication by 2'-modified nucleoside	
	1	analogs," The Journal of Biological Chemistry, 278(14):11979-11984 (2003).	
	CG	CZERNECKI, S., et al, "Synthesis of various 3'-branched 2',3'-unsaturated pyrimidine nucleosides as	
		potential anti-HIV agents," J. Org. Chem., 57:7325-7328 (1992).	
	CH	De FRANCESCO, R., et al., "Approaching a new era for hepatitis C virus therapy: Inhibitors of the	
		NS3-4A serine protease and the NS5B RNA-dependent RNA polymerase," Antiviral Research, 58:1-	
		16 (2003).	
	CI	FAIVRE-BUET, V., et al, "Synthesis of 1'-deoxypsicofuranosyl-deoxynucleosides as potential anti-	İ
]	HIV agents," Nucleosides & Nucleotides, 11(7):1411-1424 (1992).	
	Cl	FARKAS, J., et al., "Nucleic acid components and their analogues. XCIV. Synthesis of 6-amino-9-(1-	
		deoxy-β-D-psicofuranosyl)purine", Collect. Czech. Chem. Commun. 32:2663-2667 (1967).	
	CK	FARKAS, J., et al., "Nucleic acid components and their analogues. LXXIX. Synthesis of methyl 1-	
		deoxy-D-psicofuranosides substituted at C ₍₁₎ with halo atoms or a mercapto group," Collect. Czech.	
		Chem. Commun., 31:1535-1543 (1996).	<u> </u>
	CL	FEDOROV, I.I., et al, "3'-C-Branched 2'-deoxy-5-methyluridines: Synthesis, enzyme inhibition, and	
		antiviral properties," J. Med. Chem., 35(24):4567-4575 (1992).	
	CM	FRANCHETTI, P., et al., "2'-C-Methyl analogues of selective adenosine receptor agonists: synthesis	
		and binding studies," J. Med. Chem., 41(10):1708-1715 (1998).	L
	CN	GROUILLER, A., et al., "Novel p-toluenesulfonylation and thionocarbonylation of unprotected	
		thymine nucleosides," Synlett, 1993, 221-222 (March 1993).	
	CO	HARAGUCHI, K., et al., "Preparation and reactions of 2'- and 3'- vinyl bromides of uracil	
		nucleosides: Versatile synthons for anti-HIV agents," Tetrahedron Letters, 32(28):3391-3394 (1991).	

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INFO	DRMATION D	ISCL	OSURE	Filing Date	June 20, 2003		
STATEMENT BY APPLICANT				First Named Inventor	Sommadossi et al.		
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		OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS	
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Initials *	No. 1	journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Té
	DA	HARAGUCHI, K., et al., "Stereoselective synthesis of 1'-C-branched uracil nucleosides from	
		uridine," Nucleosides & Nucleotides, 14(3-5):417-420 (1995).	
	DB	HARRY-O'KURU, R.E., et al., "A short, flexible route toward 2'-C-branched ribonucleosides",	
		J.Org. Chem., 62:1754-1759 (1997). (Scheme 11).	
	DC	HARRY-O'KURU, R.E., et al., "2'-C-Alkylribonucleosides: Design, synthesis, and conformation,"	
		Nucleosides & Nucleotides, 16(7-9):1457-1460 (1997). ["Rogers" in #2; correct name in #7]	<u>.l</u>
	DD	HATTORI, H., et al, "Nucleosides and nucleotides. 175. Structural requirements of the sugar moiety	
		for the antitumor activities of new nucleoside antimetabolites, 1-(3-C-ethynyl-b-D-ribo-	
		pentofuranosyl)cytosine and -uracil," J. Med. Chem., 41:2892-2902 (1998).	
	DE	HREBABECKY, H., et al., "Nucleic acid components and their analogues. CXLIX. Synthesis of	
		pyrimidine nucleosides derived from 1-deoxy-D-psicose," Collect. Czech. Chem. Commun., 37:2059-	
	<u> </u>	2065 (1972).	
	DF	HREBABECKY, H., et al. "Synthesis of 7- and 9β-D-psicofuranosylguanine and their 1'-deoxy	
		derivatives," Collect. Czech. Chem. Commun., 39:2115-2123 (1974).	
•	DG	IINO, T., et al., "Nucleosides and nucleotides. 139. Stereoselective synthesis of (2'S)-2'-C-alkyl-2'-	
		deoxyuridines," Nucleosides and Nucleotides, 15(1-3):169-181 (1996).	
	DH	ITOH, Y., et al, "Divergent and stereocontrolled approach to the synthesis of uracil nucleosides	
	<u> </u>	branched at the anomeric position," J. Org. Chem., 60(3):656-662 (1995).	
	DI	JOHNSON, C.R., et al, "3'-C-Trifluoromethyl ribonucleosides," Nucleosides & Nucleotides,	
		14(1&2):185-194 (1995).	
	DJ	KAWANA, M., et al., "The deoxygenation of tosylated adenosine derivatives with Grignard	
		reagents," Nucleic Acids Symp. Ser., 17:37-40 (1986).	
	DK	LAVAIRE, S., et al., "3'-Deoxy-3'-C-trifluoromethyl nucleosides: Synthesis and antiviral	
		evaluation," Nucleosides & Nucleotides, 17(12):2267-2280 (1998).	
	DL	LEYSSEN, P. et al., "Perspectives for the treatment of infections with Flaviviridae," Clinical	
		Microbiology Reviews (Washington, D.C.), 13(1):67-82 (January 2000).	
	DM	MARTIN, X., et al., "Intramolecular hydrogen bonding in primary hydroxyl of thymine 1-(1-deoxy-β-	
		D-psicofuranosyl) nucleoside," Tetrahedron, 50(22):6689-6694 (1994).	
	DN	MATSUDA, A., et al., "Radical deoxygenation of tert-alcohols in 2'-branched-chain sugar pyrimidine	
		nucleosides: Synthesis and antileukemic activity of 2'-deoxy-2'(S)-methylcytidine," Chem. Pharm.	
		Bull., 35(9):3967-3970 (1987).	
	DO	MATSUDA, A., et al., "Alkyl addition reaction of pyrimidine 2'-ketonucleosides: Synthesis of 2'-	
		branched-chain sugar pyrimidine nucleosides (Nucleosides and Nucleotides. LXXXI)," Chem.	
		Pharm. Bull., 36(3):945-953 (1988).	1

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		OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS	
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	EA	MATSUDA, A., et al., "Nucleosides and Nucleotides. 94. Radical deoxygenation of tert-alcohols in 1-(2-C-alkylpentofuranosyl)pyrimidines: Synthesis of (2'S)-2'-deoxy-2'-C-methylcytidine, an	
		antileukemic nucleoside, "J. Med. Chem., 34:234-239 (1991).	
	EB	MATSUDA, A., et al., "Nucleosides and Nucleotides. 104. Radical and palladium-catalyzed	
		deoxygenation of the allylic alcohol systems in the sugar moiety of pyrimidine nucleosides," Nucleosides & Nucleotides, 11(2/4):197-226 (1992).	
	EC	MIKHAILOV, S.N., et al., "Synthesis and properties of 3'C-methylnucleosides and their phosphoric esters," Carbohydrate Research, 124:75-96 (1983).	
	ED	MIKHAILOV, S.N., et al., "Substrate properties of C'-methylnucleoside and C'-methyl-2'-deoxynucleoside 5'-triphosphates in RNA and DNA synthesis reactions catalysed by RNA and DNA polymerases," <i>Nucleosides & Nucleotides</i> , 10(1-3):339-343 (1991).	
	EE	MIKHAILOV, S.N., et al, "Hydrolysis of 2'- and 3'-C-methyluridine 2'c3'-cyclic monophosphates and interconversion and dephosphorylation of the resulting 2'- and 3'-monophosphates: Comparison with the reactions of uridine monophosphates," J. Org. Chem., 57 (15):4122-4126 (1992).	
·	EF	NUTT, R.F., et al., "Branched-chain sugar nucleosides. III. 3'-C-methyladenine", J.Org. Chem., 33:1789-1795 (1968).	
	EG	OIVANEN, M., et al, "Additional evidence for the exceptional mechanism of the acid-catalyzed hydrolysis of 4-oxopyrimidine nucleosides: Hydrolysis of 1-(1-alkoxyalkyl)uracils, seconucleosides, 3'-C-alkyl nucleosides and nucleoside 3',5'-cyclic monophosphates," J. Chem. Soc. Perkin Trans. 2, 1994:309-314 (1994).	
	ЕН	ONG, S.P., et al, "Synthesis of 3'-C-methyladenosine and 3'-C-methyluridine diphosphates and their interaction with the ribonucleoside diphosphate reductase from Corynebacterium nephridii," Biochemistry, 31(45):11210-11215 (1992).	
	EI	Oral Session V, Hepatitis C Virus, Flaviviridae; 16 th International Conference on Antiviral Research (April 27, 2003, Savannah, Ga.) p A75-77.	
	EJ	PAN-ZHOU, X-R, et al., "Differential effects of antiretroviral nucleoside analogs on mitochondrial function in HepG2 cells," Antimicrob. Agents Chemother., 44:496-503 (2000).	
	EK	ROSENTHAL, A., et al., "Branched-chain sugar nucleosides. Synthesis of 3'-C-ethyl (and 3'-C-butyl)uridine Carbohydrate Research, 79:235-242 (1980).	
	EL	SAMANO, V., et al., "Synthesis and radical-induced ring-opening reactions of 2'-deoxyadenosine-2'-spirocyclopropane and its uridine analogue. Mechanistic probe for ribonucleotide reductases," J. Am. Chem. Soc., 114:4007-4008 (1992).	

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Substitute for form 1449A/PTO				Complete if Known		
Substitute	101 101111 144920110			Application Number	10/602,136	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date	June 20, 2003	
				First Named Inventor	Sommadossi et al.	
				Group Art Unit	Unassigned	
	(use as many sheets as necessary)			Examiner Name	Unassigned	
Sheet	6	of	6	Attorney Docket Number	06171.105074 IDX 1007 DIV	

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<u>, </u>	Lov	OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS	_
Examiner Initials *	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Té
	FA	SAMANO, V., et al., "Nucleic acid related compounds. 77. 2',3'-Didehydro-2',3'-dideoxy-2'(and	
		3')-methylnucleosides via [3,3]-sigmatropic rearrangements of 2'(and 3')-methylene-3'(and 2')-O-	
		thiocarbonyl derivatives and radical reduction of a 2'-chloro-3'-methylene analogue," Can. J. Chem., 71:186-191 (1993).	
	FB	SCHMIT, C., et al, "The effects of 2'- and 3'-alkyl substituents on oligonucleotide hybridization and	╁┷
	''	stability," Biorganic & Medicinal Chemistry Letters, 4(16):1969-1974 (1994). ["Altmann"]	
	FC	SERAFINOWSKI, P.J., et al., "New method for the preparation of some 2'- and 3'-trifluoromethyl-	
	. •	2',3'-dideoxyuridine derivatives," <i>Tetrahedron</i> (Elsevier Science Publishers), 56(2):333-339 (1999).	
	FD	SHARMA, P.K., et al., "Synthesis of 3'-trifluoromethyl nucleosides as potential antiviral agents,"	
		Nucleosides, Nucleotides and Nucleic Acids, 19(4):757-774 (2000).	
	FE	SOMMADOSSI J-P, et al., "Comparison of cytotoxicity of the (-)- and (+)-enantiomer of 2',3'-	1
		dideoxy-3'-thiacytidine in normal human bone marrow progenitor cells" <i>Biochemical Pharmacology</i> ,	
		44:1921-1925 (1992).	
	FF	SOMMADOSSI J-P, et al., "Toxicity of 3'-azido-3'-deoxythymidine and 9-(1,3-dihydroxy-2-	
		propoxymethyl)guanine for normal human hematopoietic progenitor cells in vitro" Antimicrobial	
		Agents and Chemotherapy, 31:452-454 (1987).	
	FG	TRITSCH, D., et al., "3'-β-ethynyl and 2'-deoxy-3'-β-ethynyl adenosines: First 3'-β-branched	
		adenosines substrates of adenosine deaminase," Bioorganic & Medicinal Chemistry Letters, 10:139-	1
	<u> </u>	141 (2000).	
	FH	TUNITSKAYA, V.L., et al., "Substrate properties of C'-methyl UTP derivatives in T7 RNA	
		polymerase reactions. Evidence for N-type NTP conformation," FEBS Letters, 400:263-266 (1997).	
	FI	USUI, H., et al., "Synthesis of 2'-deoxy-8,2'-ethanoadenosine and 3'-deoxy-8,3'-ethanoadenosine	
		(Nucleosides and Nucleotides. LXIV)," Chem. Pharm. Bull., 34(1):15-23 (1986).	<u> </u>
	FJ	WALCZAK, K., et al., "Synthesis of 1-(3-alkyl-2,3-dideoxy-D-pentofuranosyl)uracils with potential	
	<u> </u>	anti-HIV activity," Acta Chemica Scand., 45:930-934 (1991).	
	FK	WALTON, E., et al., "Branched-chain sugar nucleosides. V. Synthesis and antiviral properties of	
	ļ	several branched-chain sugar nucleotides," J. Med. Chem., 12:306-309 (1969).	
	FL	WOLFE, M.S., et al., "A concise synthesis of 2'-C-methylribonucleosides," Tetrahedron Letters,	ļ
	ļ	36(42):7611-7614 (1995).	
	FM	WU, JC., et al., "A new stereospecific synthesis of [3.1.0] bicyclic cyclopropano analog of 2',3'-	
		dideoxyuridine, <i>Tetrahedron</i> , 46(7):2587-2592 (1990).	

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PATENT

Confirmation No.: Unassigned

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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10/602,136

Sommadossi et al.

Applicant: Filed:

June 20, 2003

TC/A.AU.:

Unassigned

Examiner:

Unassigned

Docket No.:

06171.105074 IDX 1007 DIV

Customer No.:

20786

Title:

Methods and Compositions for Treating Hepatitis C Virus

Commissioner for Patents

P. O. Box 1450

Alexandria, VA 22313-1450

REFERENCES

BOX 1 OF 2